REMARKS/ARGUMENTS

In view of the above amendments and the following remarks, reconsideration and a withdrawal of all rejections, and allowance of the pending claims is earnestly solicited.

The Claims Have Been Amended to Address the Sec. 101 Rejection.

Claims 1-6 stand rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter. This rejection is respectfully traversed in view of the amendments.

The Examiner has indicated that the claim language appears not to recite a final tangible result from the scanning step. Applicant has further articulated the invention by reciting that the step of scanning the results of said interpretation for the presence of proscribed code is accomplished and the method also includes:

> identifying proscribed code in said results, and making said results available to a reporter for reporting or to a processor for further processing of said results with a processing component.

This amendment is fully supported by the specification, and no new matter has been introduced. (See Applicant's Specification, ¶¶ [0021], [0027], [0029-30]) For these reasons, Applicant hereby respectfully requests reconsideration and a withdrawal of the 101 rejection.

The References Fail to Teach, Suggest or Disclose the Applicant's Invention.

Claims 1-4 and 6 stand rejected under 35 USC 103(a) as being unpatentable over Jordan (2002/0073323 A1) in view of Davidson. This rejection is respectfully but strenuously traversed and reconsideration and a withdrawal of the rejection are hereby requested.

The Examiner previously rejected claims 1-4 and 6 over Jordan. Applicant's prior comments were persuasive in overcoming that rejection. The Examiner, in the new rejection, now combines the reference of Davidson with Jordan to attempt to fill admitted deficiencies of Jordan, namely, Jordan's failure to disclose "interpreting code with an interpreter". The Examiner contends that Davidson discloses interpreting code, and writing the interpreter results to the stack evaluatively (referring to Fig. 1 and section 3.2.2 par. 4 of Davidson).

Applicant's present invention is not disclosed or suggested by Jordan, even considering the further combination of Davidson. Applicant's claimed method and apparatus relate to and recite interpreting code <u>with an interpreter</u> and <u>evaluatively writing the results of said interpretation</u>, and further includes the step of <u>scanning the results of said interpretation</u> for the presence of proscribed code. Applicant's invention is an improvement over the prior art.

First, there is no reason why one would seek to modify Jordan with the supposed teachings of Davidson. There must be some teaching or suggestion in order to make a modification. Jordan relates to methods and apparatus for detecting computer viruses that attempt to gain access to restricted computer system resources. (Abstract) Jordan attempts to use an emulator to emulate computer executable code in a subject file. Jordan attempts to recognize virus attempts by emulating the computer system code and the memory state caused by emulated instructions. Thus, what Jordan discloses in order for its detection system to function is to detect the behavior of the code through emulation of the code. Jordan would not teach, suggest or disclose a reason to employ detection of results of interpreted code. Applicant's claimed step of interpreting provides the ability

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for the Applicant's invention to perform its task, while Jordan is based on carrying out emulation of the code, and then monitoring that emulation. Applicant's invention noted the Jordan type prior art in discussing the drawbacks of the prior art, and the distinguishing feature of the Applicant's invention.

> Rather the interpreter used in the preferred embodiments first summarily evaluates code and then writes the results to a results table for further evaluation. This process of the preferred embodiments results in *detection of the results of the interpreted code*. This review of these results in the table is an improvement over the emulators, compilers and interpreters used in the prior art process *which detected the behavior of the code*.

> (Specification ¶ [0021], emphasis added)

Jordan does not provide a reason to make the modification proposed by the Examiner, nor would the proposed modification, if made to Jordan, arrive at the Applicant's claimed invention. Jordan appears to describe an emulator which requires the ability to execute the code of a specific platform for which the Jordan apparatus and methods are adapted. (See ¶ [0032])

The Examiner's acknowledgement of Jordan's failure to provide an interpreter is not something which may be remedied by attempting to combine further art, such as Davidson, which the Examiner contends provides the admitted missing element. Regardless of what Davidson shows, one would not be led to destroy the function and operation of Jordan. Jordan emulates code with an emulator and monitors the emulation and memory state modifications. Applicant interprets the code with an interpreter. This is entirely different. It is not clear how Jordan may be modified at all without destroying its function, if one is to somehow turn what is disclosed in Jordan into the Applicant's claimed invention. One of ordinary skill in the art would not be led to modify Jordan, as

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proposed. For these reasons, the Applicant's invention should be patentable, and the rejection withdrawn.

The cited references fail to disclose or suggest Applicant's invention for additional reasons. As pointed out above, there is no disclosure pointed to which would provide the necessary motivation, or let alone a suggestion of making a modification to Jordan. However, even if the combination of Davidson with Jordan was attempted (which as Applicant asserts one of ordinary skill in the art would not have been led to do), one still would not arrive at the Applicant's claimed invention. Davidson even mentions that the "interpreter is divided into two phases: loading/linking and execution." Applicant's invention discloses and claims an interpreter which interprets code, and which evaluatively writes the results of said interpretation. The results are then scanned for the presence of proscribed code. Neither Jordan nor Davidson appears to disclose the Applicant's claimed invention. Davidson discusses the C virtual machine (CVM) code being executed. Jordan does not appear to even mention CVM, but rather discusses adapting its method and apparatus for different platforms. (See Jordan at ¶ [0032])

One of ordinary skill in the art would not be led to combine Jordan with Davidson for additional reasons. Unlike an emulator, disclosed and relied on in Jordan, which is required to emulate, and hence process all of the code it encounters, the interpreter may rely on a known result from a string through memory to avoid having to process something where the result is known. This facilitates speed, and further distinguishes the Applicant's invention. However, attempting to modify Jordan which relies on emulation being carried out for emulated code execution to take place, as well as the emulated code execution memory state modification, would be inconsistent with what Jordan actually

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discloses. Applicant, in its previously submitted response to the office action of February 9, 2006, distinguished the interpreter from the emulator. For the same reasons that the Examiner agreed with Applicant in overcoming the rejection of Jordan and Afzal previously, those reasons are also applicable to show why one of ordinary skill in the art would not be led to modify Jordan, as the Examiner proposes.

For the above reasons, reconsideration and a withdrawal of the Examiner's rejection of claims 1-4 and 6 is respectfully requested.
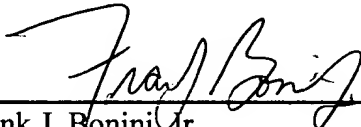
Claims 5, 7-12 stand rejected under 35 USC 103(a) as being unpatentable over Jordan (2002/0073323 A1) in view of Davidson, as applied to claims 1-4, and further in view of US 5,728,901 ("Shieh"). This rejection is respectfully but strenuously traversed and reconsideration and a withdrawal of the rejection are hereby requested.

The Examiner contends that with respect to claim 7, Jordan fails to disclose a pattern analyzer. This is further consistent with Applicant's position, discussed above, that Jordan's disclosure is of emulation of computer code, and monitoring the emulation. The pattern analyzer is what is disclosed and claimed by Applicant in conjunction with an interpreter. The pattern analyzer analyzes the results of Applicant's evaluative code interpreter. This is not emulating the code with an emulator, where line by line code execution is carried out, as Jordan appears to require. The Examiner already acknowledges that the interpreter is not found in Jordan. In addition, Shieh discloses a pattern oriented intrusion detection system. However, for the same reasons, it would not have been obvious to combine Davidson, or even the further reference Shieh, with Jordan. Considering the references for what they fairly disclose, there is still nothing to

suggest or teach modifying the emulator and method of Jordan, even with the further reference of Shieh. Accordingly, the rejection of claims 5 and 7-12 should be withdrawn.

In the event an extension or further extension of time is required, one is respectfully requested, and the Commissioner is hereby authorized to charge the Applicant's undersigned representative's deposit account for any fees which may be required in connection with any extension or the filing of this amendment/response.

Respectfully submitted,
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